

What is claimed is:

Claims:

- 5     1.     A method for effecting secure transactions over a computer network in a  
            manner designed to foil identity theft perpetrated from an untrusted  
            computer, comprising:  
  
            connecting a client computer to the network wherein the client computer  
10             provides a user interface to interact with a user;  
  
            connecting a server computer to the network;  
  
            connecting a portable secure computing device to the network;  
  
            operating the secure computing device to communicate a list of available  
            services to the client computer;  
15             responsive to receiving the list of available services using the user interface to  
            display the list of available services to a user;  
  
            responsive to a selection of one available service by the user, establishing a  
            secure connection from the secure computing device to the server;  
  
            securely communicating private information from the secure computing device  
20             to the server over the secure connection.
2.     The method of Claim 1 further comprising:  
  
            authenticating a user based on the private information; and  
25             in response to successful authentication of the user, conducting a transaction  
            between the client computer and the server computer.

3. The method of Claim 1 further comprising:  
  
transmitting from the secure computing device to the server computer user  
5 identifying information.
4. The method of Claim 3 wherein the user identifying information includes a  
secret personal identification number (sPIN).
- 10 5. The method of Claim 4 further comprising:  
  
responsive to receiving the user identifying information, operating the server  
computer to establish an association among the user, the client and the  
secure computing device.  
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6. The method of Claim 4 wherein the secure computing device has a personal  
identification number (PIN) wherein the sPIN and the PIN are unrelated.
7. The method of Claim 4 wherein the server computer uses the sPIN for only  
one session.
- 20 8. The method of Claim 1 wherein the portable secure computing device is a  
smart card.

9. A method for secure transactions over a computer network in a manner designed to foil identity theft perpetrated from an untrusted computer, comprising:
- 5 connecting a client computer to the network wherein the client computer provides a user interface to interact with a user;
- connecting a server computer to the network;
- connecting a secure computing device to the network;
- establishing a secure connection from the secure computing device to the
- 10 server;
- securely communicating private information from the secure computing device to the server over the secure connection;
- authenticating a user using the private information; and
- in response to successfully authenticating the user, conducting a transaction
- 15 between the client and the server.
10. The method of Claim 9 wherein the step of securely communicating private information comprises pushing the private information from the secure computing device to the server computer.
- 20 11. The method of Claim 10 further comprising:
- in response to successfully authenticating a user, operating the client to transmit an indication to the server that the secure computing device will send information necessary for a transaction;

operating the server to wait for the information from the secure computing device;

operating the client to select the information necessary for the transaction; and

in response to selecting the information necessary for the transaction,

5                   operating the secure computing device to transmit the selected information securely to the server.

12.   The method of Claim 9 wherein the step of securely communicating private information comprises operating the server computer to pull the private information from the secure computing device.

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13.   The method of Claim 9 further comprising:

in response to successfully authenticating a user, operating the server to transmit a request to the secure computing device to provide  
15                   information necessary to complete a transaction;

in response to a request from the server for information necessary to complete a transaction, operating the secure computing device to notify the client that the server has made the request for information necessary to complete a transaction;

20                   in response to notification from the secure computing device that the server is requesting the information necessary to complete a transaction, operating the client to obtain a user's approval or denial of the request; and

25                   in response to a user's approval, transmitting the requested information from the secure computing device to the server in a secure manner.

14. A system for effecting secure transactions over a computer network in a manner designed to foil identity theft through keystroke logging, comprising:
- 5 a server computer connected to a computer network and operable to provide some form of online transactions;
- a client computer connected to the computer network and operable to interface with a user;
- 10 a secure computing device connected to the computer network and capable of establishing a secure connection with the server computer and the client computer;
- wherein the secure computing device has logic operable to store private user information; and
- wherein the secure computing device has logic, in response to the initiation of
- 15 a transaction between a user operating the client computer and the server computer, operable to securely transmit the private user information to the server computer in a manner such that only the server can interpret the private user information.
15. The system for effecting secure transactions over a computer network of Claim 14:
- 20 wherein the secure computing device has logic to transmit a map to the server computer, the map having the elements clientIP, cardIP, login credentials, and secret personal identification number (sPIN);
- wherein the server computer has logic to request a user to enter the sPIN and
- 25 logic to verify that the entered sPIN matches the sPIN in the map.

16. The system for effecting secure transactions over a computer network of  
Claim 15:  
wherein the server computer has logic to destroy the map if the sPIN entered  
by the user does not match the sPIN of the map.
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17. The system for effecting secure transactions over a computer network of  
Claim 14:  
wherein the portable secure computing device transmits the private user  
information upon a request by the user.
- 10 18. The system for effecting secure transactions over a computer network of  
Claim 14:  
wherein the portable secure computing device transmits the private user  
information upon a request by the server computer.
- 15 19. The system for effecting secure transactions over a computer network of  
Claim 18:  
wherein the portable secure computing device transmits the private user  
information to the server computer only upon permission granted by  
the user.
- 20 20. The system for effecting secure transactions over a computer network of  
Claim 19:  
wherein the server computer destroys the map in response to invalid sPIN,  
denial of permission from the user, and transaction completion.